

## New Calculators: Strong, Silent Partners

ABOUT 2½-times more printing calculators than visual display machines are now being sold in the United States. In fact, the trend is still strongly in favor of printing calculators, although there will always be a demand for visual-type machines. Managers in most companies require hard copy results, but some are satisfied with visual answers.

The number of electronic calculators on the market is growing rapidly. Although more costly than their less sophisticated cousins, the electronic machines racked up sales of between \$40- and \$50-million in 1967. The 1968 figure is expected to double last year's.

Calculators, today, not only calculate, but the newer model electronic units can be programmed, and also have the capability of speedily and silently printing out problems and an-

swers. There are electronic calculators on the market that do not perform any calculations themselves, but serve as units which enable a user to communicate with a distant computer which actually performs the calculations.

New figuring machines offering more than one register, and with built-in square root features, can calculate the standard deviation of a group of readings on one pass. And as the newer models are made available, managers are finding that some of the prices are dropping.

### CHARTS

HERE are brief comments on some of the new machines. The charts on pages 74 and 75 contain more complete details.

Burroughs Corp. has four new electronic desk calculators, the

Series C3000, which utilize the latest integrated circuits. The four models of the Series, C3100, C3200, C3300, and C3350, vary in computational power and price. The top-of-the-line model C3350 can automatically extract a square root in less than one-third of a second and features two independent core storage memories. Each memory provides sixteen digit, eight decimal storage capacity with minus total.

Another company announcing two electronic calculators using integrated circuits is Canon U.S.A. Inc. Both new Canons, models 163 and 161S, are about the size and weight of a portable typewriter. The 163 features an automatic item count and an automatic sum of the multiplicand, both formerly found exclusively on mechanical calculators. The item count calculates the number of operations performed or items entered, for invoicing, checking and other functions. The sum of a multiplicand feature simplifies standard deviation calculations as well as invoicing and other business functions. The 163 also features an automatic comma indicator, automatic square root and a floating decimal point, which allows calculation by numbers having more decimal places than the desired answer. The 161S and the 163 feature automatic credit balance indication overflow and minus indicators, and first and second factors in all calculations.

Two electronic calculators announced by Friden, Inc., the models 1150 and 1151, operate in milliseconds. Both print answers at a speed of 37 characters a second; both store constant factors, and both hold intermediate answers in a separate four-register stack, so one never has to re-enter them manually. What differentiates the two models is that the 1151 is programmable. This feature is designed for people who work on repetitive problems such as accountants, statisticians or engineers.

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Speakers Platform

The models 362 and 380 are new additions to the 300 Series of Wang electronic calculators. The 362 comes with twelve storage registers, two independent adders, and an instant LogRegister. Each of the twelve storage registers can be split into half registers to store two numbers of six digits, along with their respective decimals and plus or minus signs. The 380 system adds programming capability, optional extra storage and optional printing capability to any 300-series calculator. The 380 transforms the calculator into a desk-top computer suitable for complex scientific calculations or lengthy data processing operations.

Remington Office Machines and Sony Corp. of America also have added new model electronic calculators. Remington's EDC III features an automatic credit balance and Stor-in Key which places any number on display into storage, ready for immediate recall. Sony, a new-comer in this market, is making available two electronic calculators, Sobax ICC-500W and ICC 600W. Both models feature two memory functions, automatic decimal entry and alignment, and automatic roundoff; both are battery operated. The major difference between the two models is that the 600W, which has not yet been marketed as we go to press, will feature an automatic square root.

#### DIALS

**T**HE NEW rotary models operate on a principle of circular dials upon which figures appear. Depressing a key activates a particular dial, which spins until the correct digit appears in the register window. These machines may either be electric or manual. On the manual models, such functions as totaling or clearing are carried out by movements of levers rather than pressing of the required keys.

SCM offers a wide range of rotary calculators. The CMA features a two-step multiplication and Insta-Clear, which automatically clears the keyboard the moment you begin a new problem; the LCM features push-but-

ton multiplication and an automatic division line-up; and the newest addition to the company's line, the 10CMX, features a full keyboard, storage facilities and decimal point identification.

Printing calculators, on the average, are the least expensive members of the calculator family. However, some new models offer such operations as electrified total transfer, which automatically reprints results of an operation for use in a subsequent operation, or double and triple zero keys. Most machines in this line feature red and black printing, and automatically record all negative answers in red.

SCM's new printing model 212 features a separate adding register which can store intermediate answers, as well as a constant multiplier multiplicand, dividend or divisor. The 212 can automatically reenter the last figure printed, which eliminates reentry errors and saves substantial time.

Olivetti Underwood has two new printing calculators, Logos 27-1 and 27-2. The 27-1 has two

registers and two memories, while the 27-2 has three memories and two registers. The 27-2 features an automatic calculation of percentages, unlimited calculation capacity and decimal point.

Monroe International is presently marketing two printing calculators, models 570 and 580. The 570 combines a ten-key adding machine with a high speed printing calculator. The unit automatically sums the products of several multiplications while printing each product. The machine can also do single multiplications, with no need to clear the machine. The 580 provides a tape reading of all calculations and has a 21-digit capacity. The unit also marks decimals and offers computer-type printout.

A new high-speed automatic printing rotary calculator is now available from Victor Comptometer Corp. The Series 10 features grand total and short-cut multiplication capabilities, and will automatically reprint the last printed amount.

The number of calculators on

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# AM's GUIDE TO CALCULATORS

MANUFACTURER OR U. S. DISTRIBUTOR	MODEL NAME	PRICE	TYPE (Printing, Rotary, Electronic, etc.)	KEYBOARD (Full, Abridged, 10-Key, etc.)	CAPACITY (No. of Columns)	FULLY OR SEMI- AUTOMATIC	STORAGE FACILITIES (Yes or No)	BACK TRANSFER FEATURE (Yes or No)	DECIMAL POINT IDENTI- FICATION (Yes or No)
ADDO-X, INC.	4653	\$725.00	Printing	Ten-Key	12/13	Fully	Yes	No	Yes
ADDO-X, INC.	4353	525.00	Printing	Ten-Key	12/13	Fully	No	Yes	No
ADDO-X, INC.	3653	518.00	Printing	Ten-Key	12/13	Fully	Yes	No	Yes
ADDO-X, INC.	3353	448.00	Printing	Ten-Key	12/13	Fully	No	No	Yes
ALMA OFFICE MACHINES CORP.	Plurimatic	\$385.00	Printing	Ten-Key	12/13	Fully	Yes	Yes	no
ALMA OFFICE MACHINES CORP.	Packard 'M'	229.50	Printing	Ten-Key	11/12	Fully	Yes	Yes	No
BOHN BUSINESS MACHINES, INC.	Cotex 30	\$249.50	Rotary	Ten-Key	11	Fully	—	—	Yes
BOHN BUSINESS MACHINES, INC.	Cotex 10	139.50	Rotary	Ten-Key	11	Semi	—	—	Yes
BURROUGHS CORP.	C3350	\$1,495.00	Electronic	Ten-Key	16	Fully	Yes	Yes	Yes
BURROUGHS CORP.	C3300	1,395.00	Electronic	Ten-Key	16	Fully	Yes	Yes	Yes
BURROUGHS CORP.	C1305	1,045.00	Key Drive	Full Keyboard	13/14	—	Yes	No	Yes
BURROUGHS CORP.	C3200	1,025.00	Electronic	Ten-Key	14	Fully	Yes	Yes	Yes
BURROUGHS CORP.	C3100	935.00	Electronic	Ten-Key	12	Fully	No	Yes	Yes
BURROUGHS CORP.	C1303	865.00	Key Drive	Full Keyboard	9/10	—	Yes	No	Yes
BURROUGHS CORP.	C1205	765.00	Key Drive	Full Keyboard	13/14	—	No	No	Yes
BURROUGHS CORP.	C1203	610.00	Key Drive	Full Keyboard	9/10	—	No	No	Yes
BURROUGHS CORP.	J700	320.00	Printing	Ten-Key	10/11	Semi	No	No	Yes
CANON	167	\$2,150.00	Electronic	Ten-Key	16	Fully	Yes	Yes	Yes
CANON	163	1,395.00	Electronic	Ten-Key	16	Fully	Yes	Yes	Yes
CANON	161S	1,195.00	Electronic	Ten-Key	16	Fully	Yes	Yes	Yes
CANON	130S	995.00	Electronic	Ten-Key	13	Fully	Yes	—	Yes
CHECK WRITER CO.	8381	\$595.00	Printing	Ten-Key	12/13	Fully	Yes	Yes	Yes
CHECK WRITER CO.	S36T	445.00	Printing	Ten-Key	12/13	Fully*	Yes	Yes	Yes
CHECK WRITER CO.	S3	395.00	Printing	Ten-Key	12/13	Fully*	Yes	Yes	Yes
CHECK WRITER CO.	8925	350.00	Rotary	Full	10x11x21	Semi	No	No	Yes
COMMODORE B.M.	402	\$279.95	Ptg. Multiplier	Ten-Key	10/11	Fully	No	Yes	Yes
COMMODORE B.M.	202	129.95	Printing	Ten-Key	10/11	Fully	No	No	Yes
CURTA CO.	#2	\$165.00	Rotary	Eleven-Key	15	Semi	Yes	Yes	Yes
CURTA CO.	#1	125.00	Rotary	Eight-Key	11	Semi	Yes	Yes	Yes
DERO RESEARCH DEVELOPMENT CORP.	Sage 1	\$995.00	Electronic	Ten-Key	10 L-20 T.	Fully	Yes	No	Yes
FACIT-ODHNER, INC.	1122	\$1,395.00	Electronic	Ten-Key	14	Fully	Yes	Yes	Yes
FACIT-ODHNER, INC.	1121	1,295.00	Electronic	Ten-Key	16	Fully	Yes	Yes	Yes
FACIT-ODHNER, INC.	CA 2-16	785.00	Rotary	Ten-Key	16	Fully	Yes	Yes	Yes
FACIT-ODHNER, INC.	CA 2-165X	645.00	Rotary	Ten-Key	16	Fully	Yes	Yes	Yes
FACIT-ODHNER, INC.	CA 1-13	525.00	Rotary	Ten-Key	9/8/13	Fully	Yes	Yes	Yes
FACIT-ODHNER, INC.	CI-13	185.00	Rotary	Ten-Key	13	Manual	Yes	Yes	Yes
FRIDEN, INC.	132	\$1,695.00	Electronic	Ten-Key	13	Fully	Yes	Yes	Yes
FRIDEN, INC.	130	1,395.00	Electronic	Ten-Key	13	Fully	Yes	Yes	Yes
FRIDEN, INC.	1150	1,495.00	Electronic	Ten-Key	13	Aut.	No	Yes	Yes
FRIDEN, INC.	1151	1,795.00	Electronic	Ten-Key	13	Aut.	Yes	Yes	Yes
FRIDEN, INC.	RSR	1,195.00	Rotary	Full/Ten-Key	21	Fully	No	No	Yes
FRIDEN, INC.	RSQ	1,025.00	Rotary	Full/Ten-Key	21	Fully	No	No	Yes
FRIDEN, INC.	RSC	995.00	Rotary	Full/Ten-Key	20	Fully	No	No	Yes
FRIDEN, INC.	RBT	975.00	Rotary	Full/Ten-Key	20	Fully	No	Yes	Yes
FRIDEN, INC.	STW-10	880.00	Rotary	Full/Ten-Key	20	Fully	No	No	Yes
FRIDEN, INC.	1217	695.00	Printing	Ten-Key	13	Fully	Yes	Yes	Yes
FRIDEN, INC.	CW-10	535.00	Rotary	Full Keyboard	20	Semi	No	No	Yes
INTER-CONTINENTAL TRADING	Anita Mark IX	\$990.00	Electronic	Full Keyboard	10x10	Fully	No	Yes	Yes
INTER-CONTINENTAL TRADING	Anita Mark VIII	690.00	Electronic	Full Keyboard	10x10	Fully	Yes	No	Yes
MONROE	EPIC 3000	\$1,995.00	Electronic Printing Programmable	Ten-Key	16	Fully	Yes	Yes	Yes
MONROE	EPIC 2000	1,795.00	Electronic Printing Programmable	Ten-Key	16	Fully	Yes	Yes	Yes
MONROE	770	1,350.00	Electronic Display	Ten-Key	15 (30 for multi)	Fully	Yes	Yes	Yes
MONROE	580	1,050.00	Printing	Ten-Key	21	Fully	Yes	Yes	Yes
MONROE	730	1,195.00	Electronic Display	Ten-Key	15	Fully	Yes	Yes	Yes
MONROE	8F-1-213	1,010.00	Rotary	Full	10	Fully	No	Yes	Yes

Note: Because of space requirements, some listings are representative rather than complete.

the market is large, and making the right choice is not simple. The charts above indicate the various features offered with each ma-

chine, and the prices are indicated as well. When you find the calculators which come closest to those that seem to fill your needs,

have the equipment brought in for a demonstration. You will see the calculators in action, and get a chance to try them yourself. □

# ... ELECTRONIC, ROTARY AND PRINTING

MANUFACTURER OR U. S. DISTRIBUTOR	MODEL NAME	PRICE	TYPE (Printing, Rotary, Electronic, etc.)	KEYBOARD (Full, Abridged, 10-Key, etc.)	CAPACITY (No. of Columns)	FULLY OR SEMI- AUTOMATIC	STORAGE FACILITIES (Yes or No)	BACK TRANSFER FEATURE (Yes or No)	DECIMAL POINT IDENTI- FICATION (Yes or No)
MONROE	8F-213	875.00	Rotary	Full	10	Fully	No	Yes	Yes
MONROE	6F-212	\$825.00	Rotary	Full	40	Fully	No	No	Yes
MONROE	570	685.00	Printing	Ten-Key	10/15	Fully	Yes	Yes	No
MONROE	4F4-212	530.00	Rotary	Full	10	Semi	No	No	Yes
MONROE	111E 116	345.00	Printing	Ten-Key	11/12	Fully (no div.)	Yes	Yes	No
OLIVETTI UNDERWOOD	101	\$3,850.00	Electronic	Ten-Key	22	Fully	Yes	Yes	Yes
OLIVETTI UNDERWOOD	Logos 27-2	1,050.00	Printing	Ten-Key	15	Fully	Yes	Yes	Yes
OLIVETTI UNDERWOOD	Logos 27-1	825.00	Printing	Ten-Key	15	Fully	Yes	Yes	Yes
OLIVETTI UNDERWOOD	TET	875.00	Printing	Ten-Key	12/13	Fully	Yes	Yes	Yes
OLIVETTI UNDERWOOD	D24 6T	725.00	Printing	Ten-Key	12/13	Fully	Yes	Yes	Yes
OLIVETTI UNDERWOOD	D24	625.00	Printing	Ten-Key	12/13	Fully	Yes	Yes	Yes
OLIVETTI UNDERWOOD	M-24GT	560.00	Printing	Ten-Key	12/13	Fully	Yes	Yes	Yes
OLIVETTI UNDERWOOD	M-20	346.00	Printing	Ten-Key	10/11	Fully	No	No	Yes
OLIVETTI UNDERWOOD									
PAILLARD, INC.	165	\$470.00	Printing	Ten-Key	12/13	Fully	Yes	Yes	Yes
PAILLARD, INC.	365	395.00	Printing	Ten-Key	12/13	Fully	No	No	Yes
REMINGTON OFFICE MACHINES	EDC 3	\$970.00	Electronic	Eleven-Key	20	Fully	Yes	Yes	Yes
REMINGTON OFFICE MACHINES	104	750.00	Printing	Ten-Key	16/17	Fully	Yes	Yes	Yes
REMINGTON OFFICE MACHINES	DM 99120	675.00	Printing	Ten-Key	13/14	Fully	—	—	Yes
REMINGTON OFFICE MACHINES	DM 99140	599.50	Printing	Ten-Key	11/12	Fully	—	—	Yes
REMINGTON OFFICE MACHINES	DX 94	399.50	Printing	Ten-Key	10	Semi	No	No	No
SCM CORP.	Cogito 566 PR	\$1,995.00	Electronic/Ptg.	Ten-Key	16	Fully	Yes	Yes	Yes
SCM CORP.	Cogito 240 SR	1,473.00	Electronic	Ten-Key	24	Fully	Yes	Yes	Yes
SCM CORP.	416-S	1,185.00	Rotary/Ptg.	Ten-Key	16	Fully	Yes	Yes	Yes
SCM CORP.	316-A	985.00	Rotary/Ptg.	Ten-Key	16	Fully	Yes	Yes	Yes
SCM CORP.	10 CMA	895.00	Rotary	Full Keyboard	20	Fully	No	No	Yes
SCM CORP.	ABL	865.00	Rotary	Full Keyboard	20	Fully	No	No	Yes
SCM CORP.	8 CMA	835.00	Rotary	Full Keyboard	16	Fully	Yes	No	Yes
SCM CORP.	10 CMX	790.00	Rotary	Full Keyboard	20	Fully	Yes	Yes	Yes
SCM CORP.	212	755.00	Printing	Ten-Key	12	Fully	No	No	Yes
SCM CORP.	10 CM	755.00	Rotary	Full Keyboard	20	Fully	No	No	Yes
SCM CORP.	8 CM	695.00	Rotary	Full Keyboard	16	Fully	No	Yes	Yes
SCM CORP.	505-X	635.00	Rotary	Ten-Key	16	Fully	No	No	Yes
SCM CORP.	8 CDT	475.00	Rotary	Full Keyboard	16	Semi	No	No	Yes
SONY	ICC 500W	\$1,250.00	Electronic	Ten-Key	14	Fully	Yes	Yes	Yes
SONY	ICC 600W	N.A.	Electronic	Ten-Key	14	Fully	Yes	Yes	Yes
TOSHIBA-AMERICA	Toscal 8C-1411	\$1,095.00	Electronic	Ten-Key	14	Fully	Yes	Yes	Yes
TOSHIBA-AMERICA	Toscal 8C-1201	825.00	Electronic	Ten-Key	12	Fully	Yes	No	Yes
VICTOR COMPTOMETER CORP.	120	\$995.00	Key Drive	Full	13	Semi	Yes	No	Yes
VICTOR COMPTOMETER CORP.	90	865.00	Key Drive	Full	10	Semi	Yes	No	Yes
VICTOR COMPTOMETER CORP.	10-871	725.00	Printing	Ten-Key	13/14	Fully	Yes	No	Yes
VICTOR COMPTOMETER CORP.	Premier 79-88-54	635.00	Printing	Ten-Key	14	Fully	Yes	No	Yes
VICTOR COMPTOMETER CORP.	Custom 75-88-54	570.00	Printing	Ten-Key	11	Fully	No	No	Yes
VICTOR COMPTOMETER CORP.	Premier 77-88-54	560.00	Printing	Ten-Key	11	Fully	Yes	No	Yes
VICTOR COMPTOMETER CORP.	12 MGT	560.00	Printing	Ten-Key	12	Fully	No	No	Yes
VICTOR COMPTOMETER CORP.	Custom 73-85-54	495.00	Printing	Ten-Key	11	Fully	No	No	Yes
VICTOR COMPTOMETER CORP.	12 ML	445.00	Printing	Ten-Key	12	Fully	No	No	Yes
VICTOR COMPTOMETER CORP.	Custom 72-85-54	346.00	Printing	Ten-Key	11	Fully	Yes	Yes	Yes
WANG LABORATORIES, INC.	320S	\$5,130.00	Electronic	Ten-Key	10	Fully	Yes	Yes	Yes
WANG LABORATORIES, INC.	310S	4,710.00	Electronic	Ten-Key	10	Fully	Yes	Yes	Yes
WANG LABORATORIES, INC.	370	4,625.00	Electronic	Ten-Key	10	Fully	Yes	Yes	Yes
WANG LABORATORIES, INC.	300S	4,280.00	Electronic	Ten-Key	10	Fully	Yes	Yes	Yes
WANG LABORATORIES, INC.	362	2,795.00	Electronic	Ten-Key	10	Fully	Yes	Yes	Yes
WANG LABORATORIES, INC.	360	2,495.00	Electronic	Ten-Key	10	Fully	Yes	Yes	Yes
WANG LABORATORIES, INC.	320	2,095.00	Electronic	Ten-Key	10	Fully	Yes	Yes	Yes
WANG LABORATORIES, INC.	310	1,895.00	Electronic	Ten-Key	10	Fully	Yes	Yes	Yes
WANG LABORATORIES, INC.	300	1,690.00	Electronic	Ten-Key	10	Fully	Yes	Yes	Yes
WANG LABORATORIES, INC.	380	1,500.00	Electronic	Ten-Key	10	Fully	Yes	Yes	Yes

\*Fully automatic multiplication.

FOR MORE INFORMATION ON CALCULATING MACHINES SHOWN ABOVE, CIRCLE ○ NUMBER ON INQUIRY CARD ON PAGE 67.

Addo-X, Inc. ....	○ 170	Curta Co. ....	○ 177	Paillard, Inc. ....	○ 184
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